



SBR(X)2045CT

Trench Schottky Barrier Rectifier
Reverse Voltage 45 Volts Forward Current 20 Amperes

Features

Ultra Low $V_F=0.36V$ at $I_F=3A$ (25°C)

Ultra Low $V_F=0.48V$ at $I_F=10A$ (25°C)

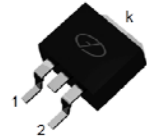
- Low forward voltage drop, low power losses
- High efficiency operation
- Plastic package has underwriters Laboratory Flammability Classification 94V-0



Package: ITO-220-AB
SBRF2045CT



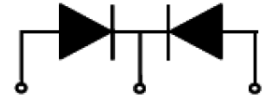
Package: TO-220-AB
SBR2045CT



Package: TO-263
SBRB2045CT

Mechanical Data

- Case: Epoxy, Molded
- Weight: 1.9grams(TO220/ITO220),1.40grams(TO263) (approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max. for 10 sec
- Shipped 50 units per plastic tube or tape reel packing 800/reel(TO263)



1. Anode 2.Cathode 3. Anode

Maximum Ratings & Electrical Characteristics

($T_A=25^\circ C$ unless otherwise noted)

| PARAMETER | TEST CONDITIONS | | SYMBOL | SBR(X)2045CT | UNIT |
|---|------------------------|---------------------------------------|-----------|-----------------------|---------------|
| Maximum repetitive peak reverse voltage | | | V_{RRM} | 45 | V |
| Working peak reverse voltage | | | V_{RWM} | 45 | V |
| Maximum DC blocking voltage | | | V_{DC} | 45 | V |
| Maximum average forward rectified current at $T_c=105^\circ C$ total device/ per diode | | | $I_F(AV)$ | 20 10 | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load per diode | | | I_{FSM} | 150 | A |
| Peak repetitive reverse current per leg at $t_p=2.0\mu s$, 1KHz | | | I_{RRM} | 1.0 | A |
| Voltage rate of change (rated V_R) | | | DV/dt | 10000 | V/us |
| Operating junction temperature range | | | T_J | -55 to +150 | °C |
| Storage temperature range | | | T_{STG} | -55 to +150 | °C |
| Isolation voltage (ITO-220-AB only) from terminal to heatsink $t = 1$ sec | | | V_{AC} | 1500 | V |
| Maximum instantaneous forward voltage per leg | $I_F=10A$ $I_F=10A$ | $T_C=25^\circ C$ $T_C=125^\circ C$ | V_F | 0.54(0.48TYP) 0.46 | V |
| Maximum reverse current per leg at working peak Reverse voltage | | | I_R | 200 15 | μA mA |

Thermal Characteristics $T_A=25^\circ C$ unless otherwise noted

| Symbol | Parameter | TYP (TO-220-AB/TO263) | TYP (ITO-220-AB) | Unit |
|---------------|---|-----------------------|------------------|-------|
| R θ JC | Thermal Resistance, Junction to Case per Leg | 2.0 | 4.0 | °C /W |
| R θ JA | Thermal Resistance, Junction to Ambient per Leg | 62.5 | 62.5 | °C /W |

Note: Pulse test:300us pulse width, duty cycle=2%





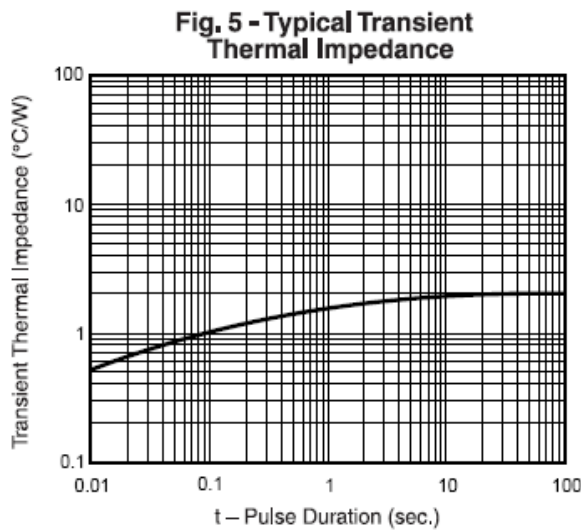
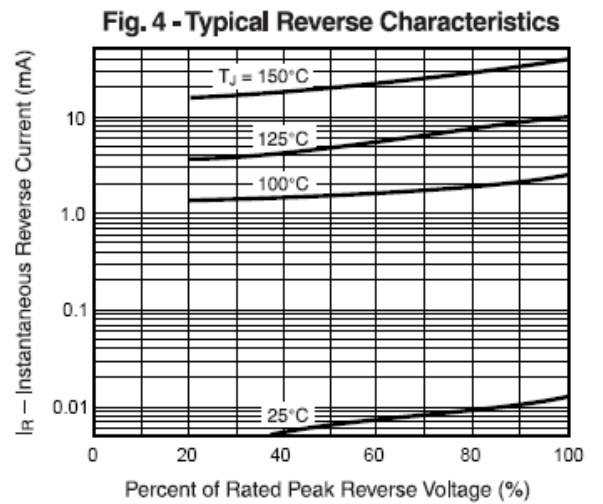
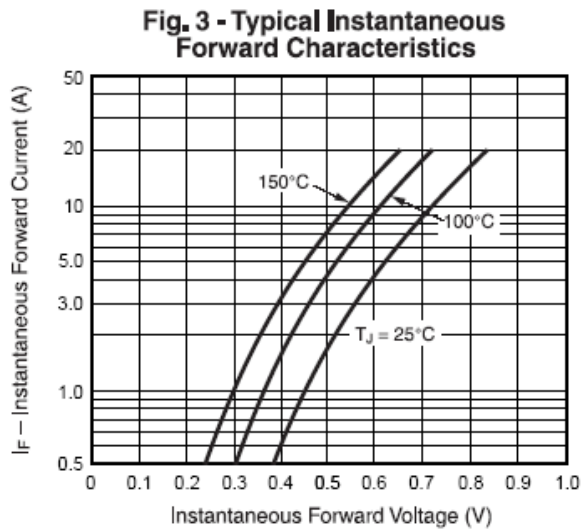
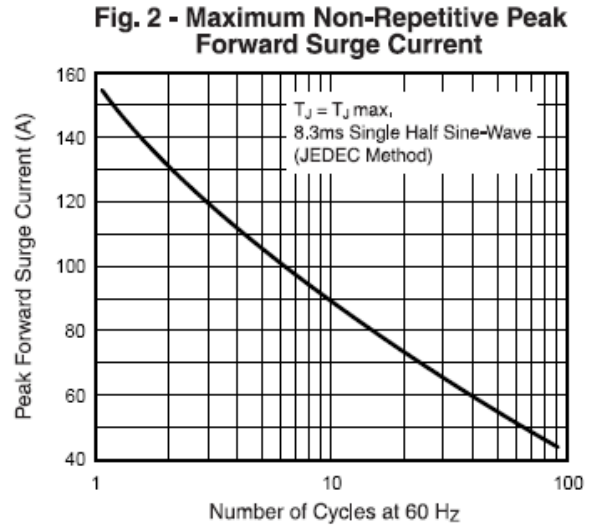
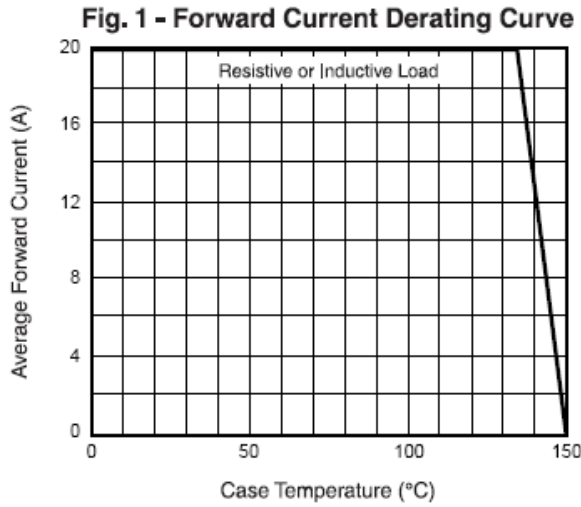
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Ratings and Characteristics Curves

($T_A = 25^\circ\text{C}$ unless otherwise noted)





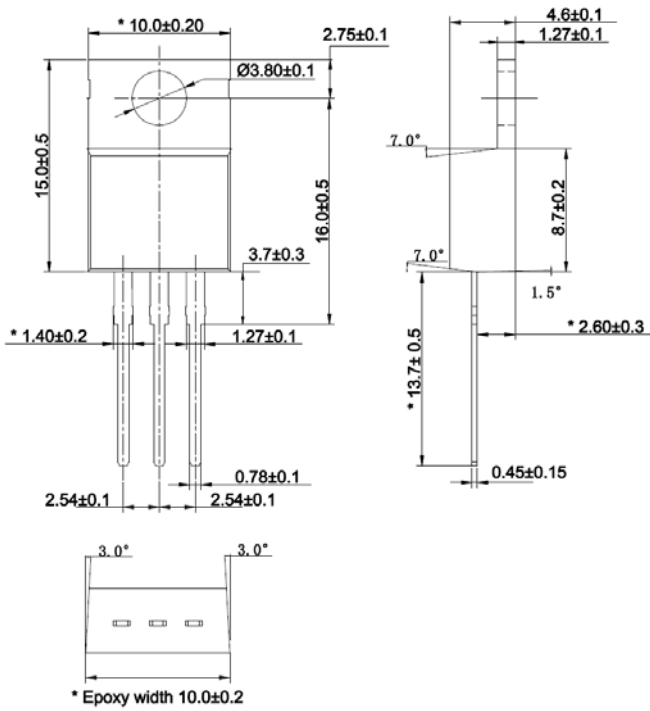
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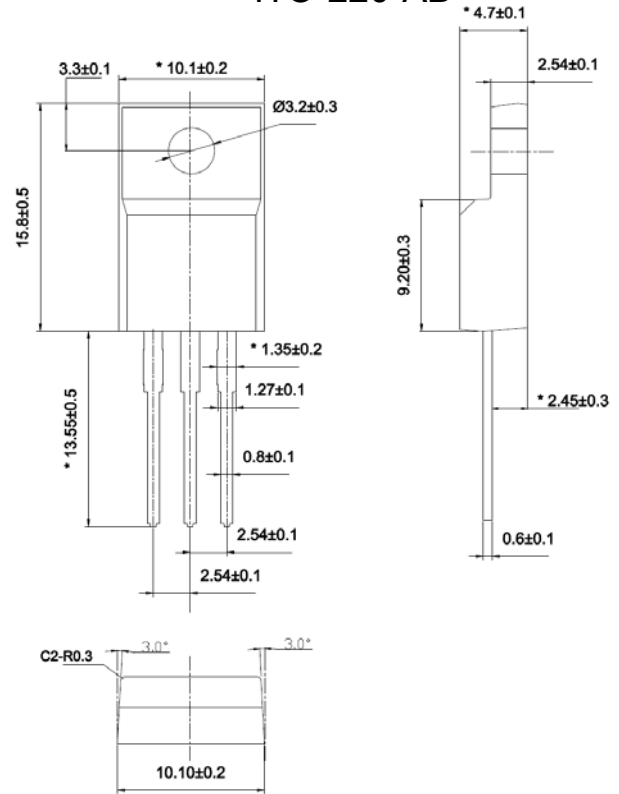
Package Outline Dimensions

Unit: millimeters

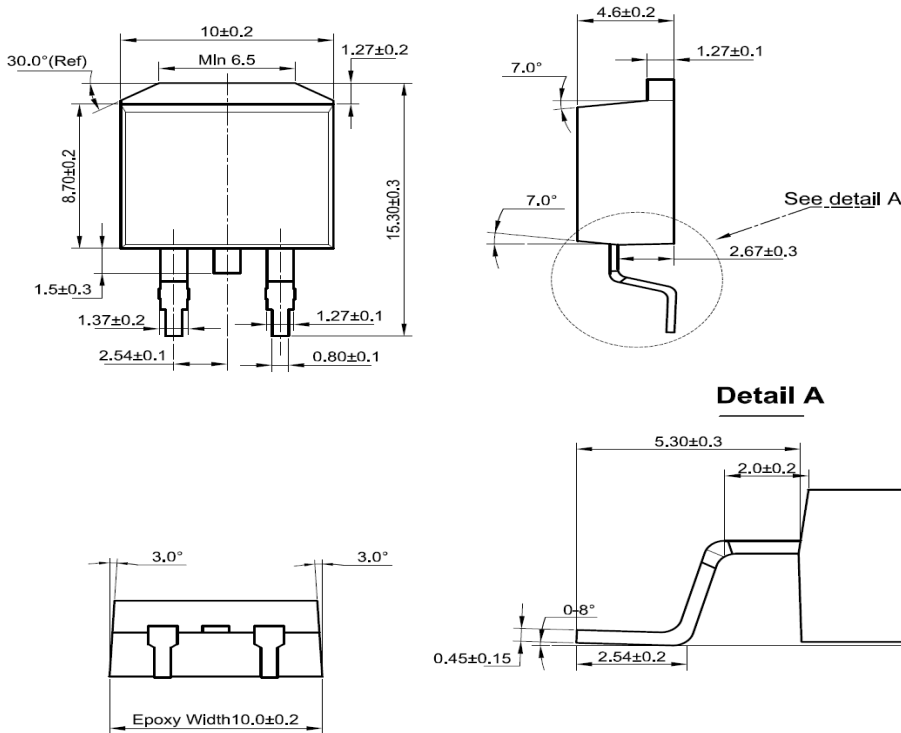
TO-220-AB



ITO-220-AB



TO-263





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